

**Catalogue** = = = =

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**New York ~ ~  
Trade School,**

**First Avenue, 67th & 68th Streets,**

**...New York...**

**Eighteenth Season, 1898-99.**

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CATALOGUE

New York Trade School,

FIRST AVENUE, 67th & 68th STREETS,

NEW YORK.

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EIGHTEENTH SEASON, 1898-99.

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JOHN POLHEMUS PRINTING COMPANY,  
121 FULTON STREET,  
NEW YORK.



VIEW OF SCHOOL BUILDINGS FROM FIRST AVENUE AND 67TH STREET.

# NEW YORK TRADE SCHOOL,

First Avenue, 67th & 68th Streets,

NEW YORK.

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Eighteenth Season Commences October 17, 1898.

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## EVENING CLASSES IN

*Bricklaying, Plastering, Plumbing, Electrical*

*Work, Carpentry, House Painting, Steam*

*Fitting, Fresco Painting, Blacksmith's*

*Work, Printing, Sign Painting, Sheet*

*Metal Cornice Work and Drawing.*

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## DAY CLASSES IN

*Plumbing, House and Fresco Painting, Sign Painting,*

*Bricklaying and Plastering, Carpentry,*

*and Steam and Hot Water Fitting.*

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THE CHARGES FOR INSTRUCTION INCLUDE THE USE OF TOOLS AND MATERIALS.

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*The New York Trade School is convenient of access by the elevated roads of Second and Third Avenues, by the surface cars on First, Second, Third, Lexington and Madison Avenues, and by the 59th Street crosstown cars.*

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INSPECTION INVITED OF LAST SEASON'S WORK ON WEEK DAYS AND SUNDAY AFTERNOONS.

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*All correspondence should be addressed to the school.*

FOUNDED, 1881.

INCORPORATED, 1892.

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**TRUSTEES.**

R. FULTON CUTTING, J. PIERPONT MORGAN,  
WILLIAM E. DODGE, F. AUGUSTUS SCHERMERHORN,  
J. ROOSEVELT ROOSEVELT, J. PIERPONT MORGAN, JR.,  
ARCHIBALD K. MACKAY.

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**TRADE SCHOOL COMMITTEES.**

MASTER PLUMBERS' ASSOCIATION.

EDWARD MURPHY, GEORGE D. SCOTT, FRANK REYNOLDS,  
THOMAS J. TUOMEY, JAMES MUIR.

MASTER PAINTERS' AND DECORATORS' ASSOCIATION.

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NEW YORK EMPLOYERS' ASSOCIATION OF ROOFING AND MANUFACTURERS  
IN SHEET METAL.

JOHN NEIL, M. HALLIDAY, FRANK SCHILLER.

GENERAL SOCIETY OF MECHANICS AND TRADESMEN OF NEW YORK.

JOHN L. HAMILTON, JOHN H. McCULLAGH, JAMES CURRAN,  
PAUL NATHAN, JOHN P. RIKER, ROBERT CHRISTIE,  
STEPHEN M. WRIGHT, RICHARD T. DAVIES.



## THE NEW YORK TRADE SCHOOL.

THE New York Trade School was founded in 1881 by the late Col. Richard Tylden Auchmuty. The purpose of the school is to give instruction to young men in certain trades, and to enable young men already in those trades to improve themselves. Owing to its decadence, the apprentice system no longer affords young men wishing to learn a trade that careful, systematic and thorough training which they should receive if they are to be mechanics of the highest skill. Col. Auchmuty clearly saw the serious need this problem presented, and to his philanthropy and personal effort is due the establishment of the New York Trade School. While a charge is made for admission, the terms of tuition are merely nominal and meet but a small part of the cost of maintaining the school. A liberal endowment, which the school possesses, enables the institution to carry out the object for which it was founded.

### SYSTEM OF INSTRUCTION.

The system of instruction followed at the school is what is known as the "Auchmuty System," and was originated by the founder. By this system, a course is arranged in which both the practical and theoretical branches of the trade are taught, so that not only is skill quickly acquired, but the scientific principles that underlie the work are also studied. This system differs from anything heretofore attempted in trade instruction. It has produced remarkable results and has attracted much attention in this country and in Europe. As a result of the development of the various courses to their present efficiency, it can safely be said that the purpose for which the system followed at the New York Trade School was devised has been accomplished, viz.: to enable young men to learn the science and practice of certain trades thoroughly, expeditiously and economically, leaving speed of execution and experience to be acquired at real work after leaving the school. For each trade taught at the school a course of instruction has been prepared. These courses outline the work which the student is required to go through. At first the student is put on work that is simple, but as skill and a workmanlike use of the tools is acquired, he is advanced to work that is more difficult and complicated until he is made familiar with the various branches of his trade. The work given the student is of a thoroughly practical character such as will be met with in actual practice at the trade.

The scientific instruction imparts knowledge of the trade that is of the highest value, and is given by means of carefully prepared lectures, manuals, diagrams and experiments.

Mechanics of high skill and long experience act as instructors, and each student receives individual care and attention. Careful

explanation is made of every step in the course. The instructors are constantly with the students, and each member of the class is shown how to hold his tools and how each piece of work should be done.

## ADVANTAGES.

A comparison between the present-day method of learning a trade in a shop and the trade school system clearly shows the advantages which the latter offers young men. In the average shop neither the master nor the workman have the time to give the young man the instruction he should receive. What knowledge is obtained the lad himself acquires by observation, and as a result of the neglect of proper teaching his progress is slow and he can get, at best, but a limited knowledge of his trade. In a Trade School every endeavor is made to advance the student in the trade he is learning, and by reason of the care that is devoted to his instruction, it is not long before he understands how to use his tools and is capable of doing work that makes him of value to his employer. An important feature of the trade school system too, is, that a young man can quickly determine whether he possesses an aptitude for a certain trade. In a shop but little opportunity is given for practice, and it is frequently the case that a lad does not discover until after a long term of service and when it is too late to make a change, that he has erred in the selection of a trade.

## BUILDINGS AND EQUIPMENT.

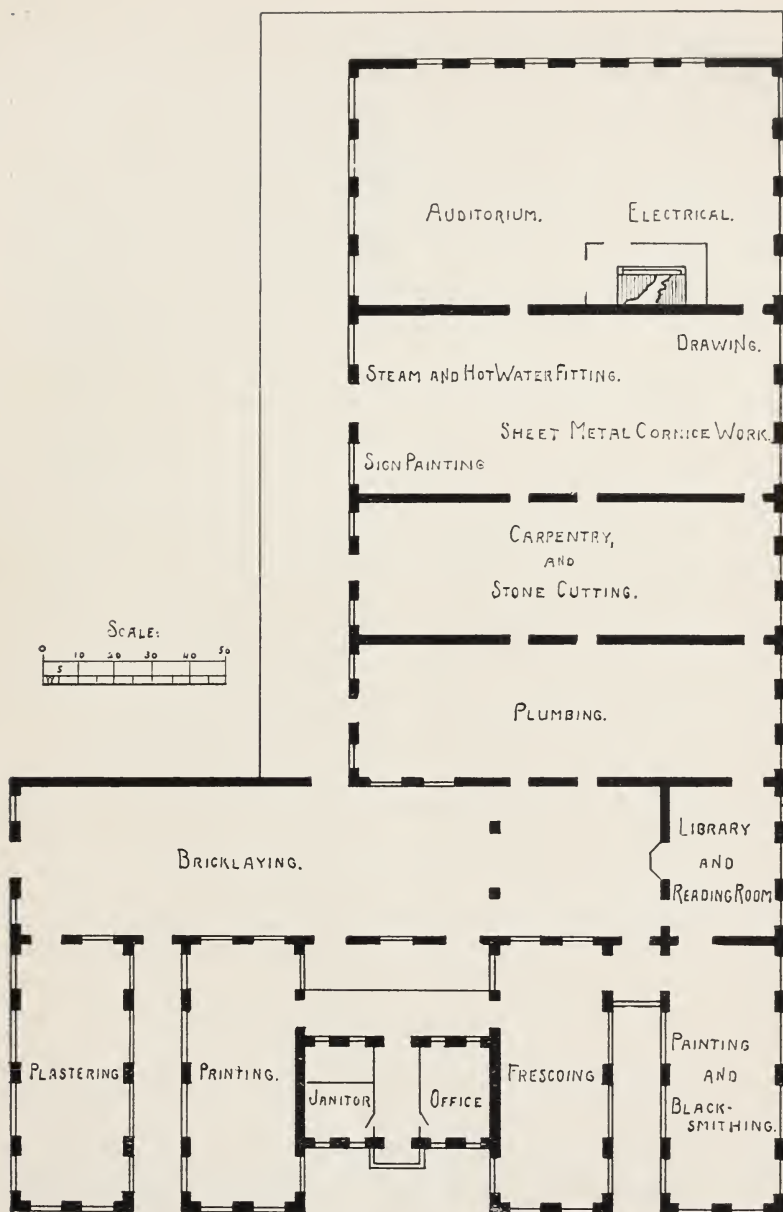
The school is located on First Avenue, 67th and 68th Streets, and covers a plot of ground measuring 200 feet on the avenue, 325 feet on 67th Street, and 113 feet on 68th Street. The main entrance is on First Avenue. The buildings are built of brick and are one story in height except those erected in 1892 and in 1896. These later additions are three stories high. The various workshops and lecture rooms are spacious, well lighted and ventilated, and are heated by steam. The arrangement of the workshops is illustrated in a ground plan of the buildings shown on another page. The library contains a collection of the best class of literature, and these books the members of the school are privileged to take home. Trade and technical papers are also kept on file for the use of the students.

The equipment of the respective workshops of the school affords every facility for instructive purposes. Each student is provided with all necessary tools and material and is given ample bench room.

## EVENING CLASSES.

The Evening Classes are intended to afford young men already in the trades an opportunity to improve themselves, and to give young men who are earning their living at other occupations during the day a chance to learn a trade. The hours of attendance of the





GROUND PLAN OF BUILDING—NEW YORK TRADE SCHOOL.

evening classes are from 7 to 9.30 o'clock and enable those who are regular in attendance to learn in a term more than can be acquired in a shop in many years. On school nights the reading room will be opened evenings at six o'clock, and young men who choose may occupy this room until the hour when class work begins.

## **DAY CLASSES.**

The Day Classes, which are also open to beginners as well as to those who have some knowledge of the trade, graduate young men who are possessed of the skill of the average journeyman and have a wider knowledge of the trade in all its branches. The past few years much work of an advanced character has been introduced in the various day courses, and the constant practice gained by continuous application such as the hours of the day classes afford enables a pupil to rapidly acquire both skill and proficiency.

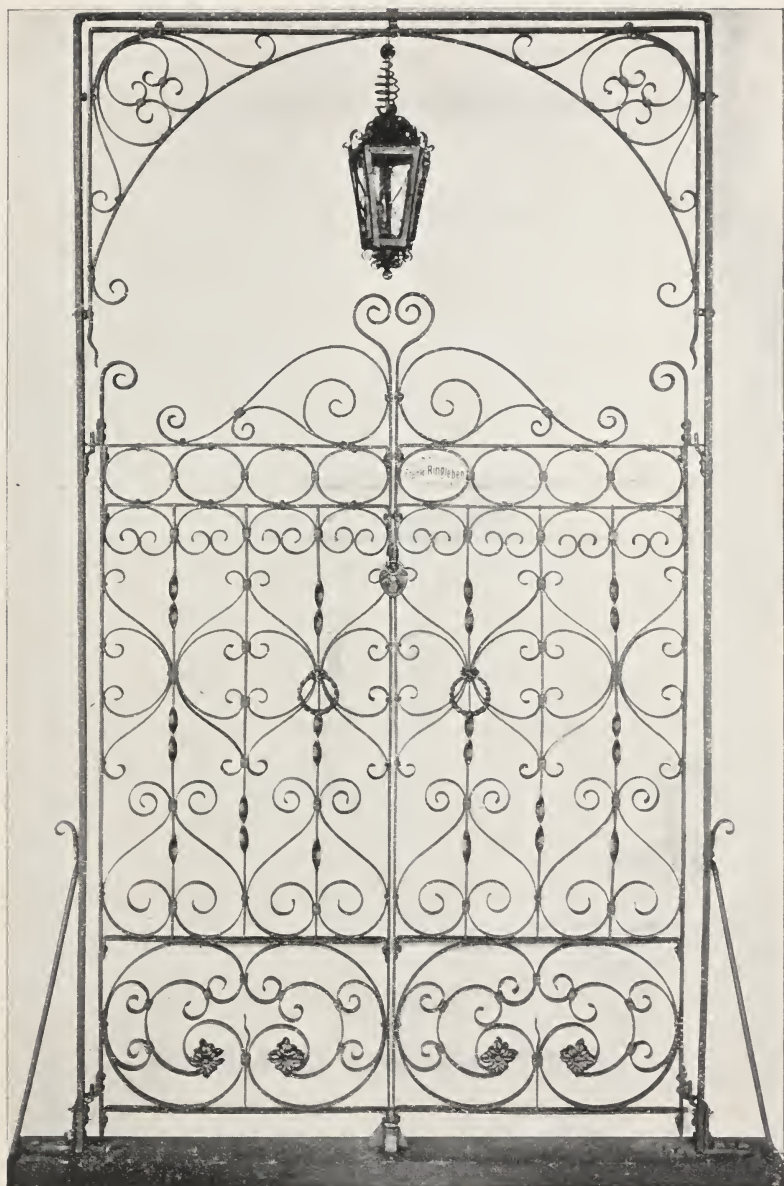
## **EXAMINATIONS.**

At the termination of the course of instruction, a careful examination is held of both the day and evening classes. To those who attain the required standard in workmanship, theoretical knowledge and general proficiency, a Certificate is given. To those who have not advanced sufficiently in manual work, but otherwise pass a satisfactory examination, a Testimonial of Merit will be issued. Owing to the limited amount of time in an evening course, it is not always possible for a student of an evening class to get far enough in the manual course to obtain a Certificate the first year; but many evening students return to continue their studies and by completing the course of instruction, obtain a Certificate. The Testimonial of Merit entitles the recipient, should he not complete the school course, to apply for re-examination at the school within three years, and if in the meantime by working at the trade the necessary proficiency has been acquired, a Certificate will be issued.

Students who obtain a Certificate or a Testimonial of Merit are given the privilege of entering the following year at half the regular tuition, provided the same course is taken. This reduction is only allowed in the evening courses.

## **TRADE SCHOOL COMMITTEES.**

The school is greatly indebted to the various trade school committees who visit the institution and co-operate in the supervision of the classes. The members of the committees are representative master mechanics who serve for no other reward than the good of their trades and the welfare of the young men. The members of the committees make frequent visits to the school to watch the progress of the students, and make suggestions in regard to the instruction as may occur to them.



IRON GATE MADE BY A STUDENT OF THE BLACKSMITHS' CLASS.

## ATTENDANCE.

Since the New York Trade School was founded 6,805 young men have attended the school, and during the past five years the annual attendance has averaged over five hundred students.

The evening classes are made up of young men from New York, Brooklyn, Jersey City, Hoboken, Newark, Paterson, Bergen Point, Staten Island, Long Island City, and from Westchester County.

The Day Classes have been attended by young men from Alabama, California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia and Wisconsin; also from the District of Columbia and from New Brunswick, Prince Edward's Island, Nova Scotia and the Provinces of Ontario and Quebec, in the Dominion of Canada.

## STUDENTS' DORMITORY.

In connection with the school there is maintained a students' dormitory where young men whose homes are distant from the city may obtain accommodations. This building, which was erected expressly for dormitory purposes, is within five minutes' walk of the school and contains pleasant, comfortable and well furnished rooms. The rooms are of various sizes, some being arranged for one occupant, while the larger rooms have accommodations for two and three young men. Each young man has his own bed. The rate for lodging is six dollars per month for each young man, payable in advance. This includes light and attendance. Meals can be had in neighboring houses and restaurants at from three to three and a half dollars per week. Every endeavor is made to see that each young man gets suitably located. Arrangements for board and lodging can be made after arrival in New York.

Those who desire accommodations in the dormitory should make application when entrance is made at the school. The rooms will be allotted in the order that applications are received.

## APPLICATION FOR ADMISSION.

Beginning October 3d, applications for admission to the school will be received. From that date the office will be open evenings as well as during the day. Young men residing in the city are required to call in person and enroll. Those living out of town may make application by mail. No young man should come to New York without first ascertaining if admission to the school can be secured.





PANEL PAINTED BY A STUDENT OF THE FRESCO CLASS.

## VISITORS.

The school is open to visitors during the following hours :

Daily, except Saturday, - - - from 9 a.m. to 4 p.m.

Saturdays, - - - - - " 9 a.m. to 12 m.

Sundays, - - - - - " 2 p.m. to 5 p.m.

Visitors are always welcome and will be conducted through the institution and furnished with such information as may be desired. The



**"THE HARDENBROOK."**

**Students' Dormitory, No. 300 East Sixty-seventh Street.**

THE BRICKWORK OF THIS BUILDING WAS DONE BY GRADUATES OF THE  
NEW YORK TRADE SCHOOL.



work of last season's classes will be on exhibition until the school opens. During the school session the classes may be seen at work.

## OFFICE.

All correspondence should be addressed to the New York Trade School. The office hours are :

Daily, except Saturday,	-	-	-	8 a.m. to 5 p.m.
Saturday,	-	-	-	8 a.m. to 12 m.
Evenings, during the school season,				7 p.m. to 9.30 p.m.



## COURSES OF INSTRUCTION.

In the chapters that follow, an outline is given of the various courses of instruction, showing on what lines the work in the different departments is conducted. These announcements also contain information as to the date of opening of the different classes, and the charges made for tuition.

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## DRAWING.

**EVENING CLASS.**—Instruction in drawing will be given on Tuesday and Thursday evenings from 7 to 9.30 o'clock, commencing on October 18, 1898, and ending on April 5, 1899.

**TERMS:**—Six dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 25 years of age.

Heretofore instruction in drawing has been given only in connection with the day courses, but as the possession of a knowledge of drawing on the part of the mechanic is becoming so important, it is felt that many young men employed at some trade during the day and who can only attend a course of an evening, would like to have an opportunity of obtaining the instruction which this course will provide. By this course it is not intended to make expert draughtsmen. The aim will be to give such instruction as will enable one to readily read drawings, both of plans and of work, such as generally come before the mechanic in his trade. The instruction will begin with a short course in mechanical drawing, on the completion of which, the instruction will branch out into elementary plan work.

Graduates of the school will find this course particularly valuable to them in their trades. No examination will be held in this course at the end of the term, as in the other departments of the school.

## ELECTRICAL WORK.

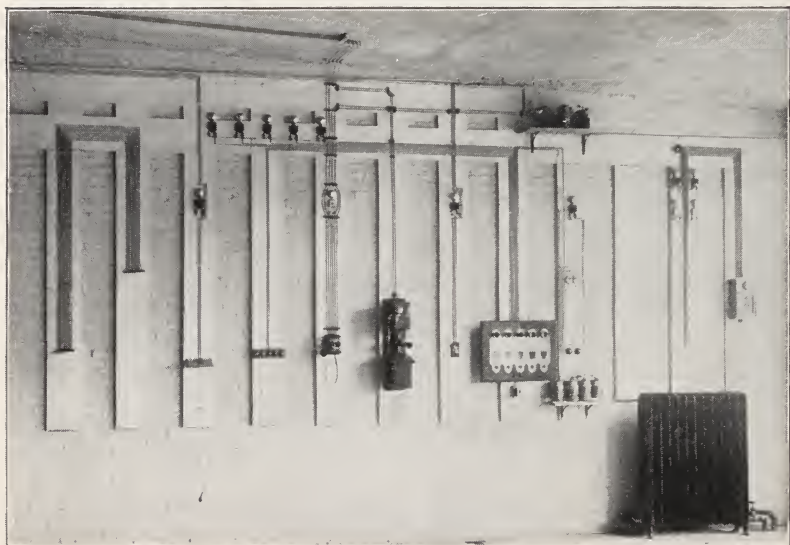
**EVENING CLASS.**—Instruction in Electrical Work will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending on April 5, 1899. During the final week of the term an examination will be held, and to those who pass, certificates will be awarded.

**TERMS:**—Sixteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 22 years of age.

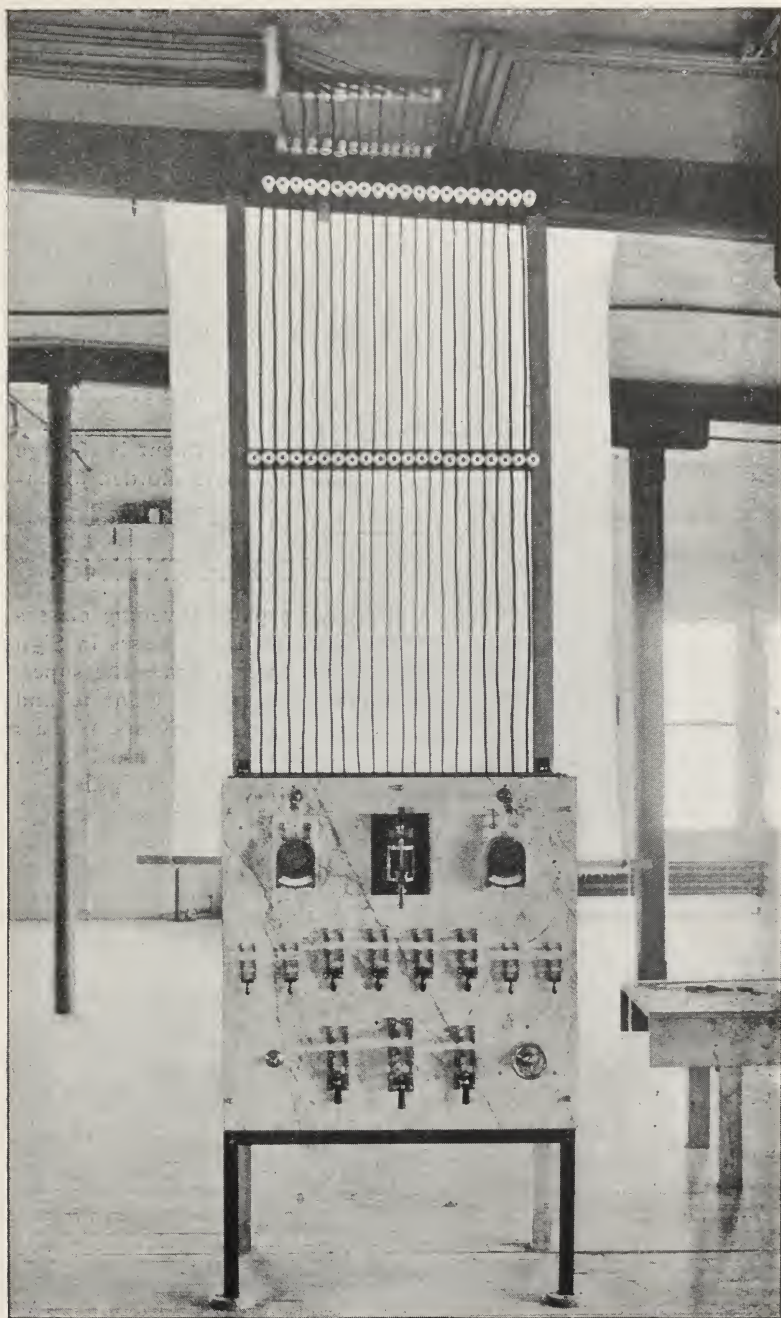
The number that can be taken in this class is limited, and should the list of applications exceed the accommodations, the school reserves the right to hold an entrance examination.

The different divisions included in this course are Bell Work, Burglar Alarm Systems, Electric Gas Lighting, and Electric Wiring.

In bell work, the student is first taught how to make, solder and tape joints; tack up wires, and to install wire on cleats and insulators. Then follows a series of exercises in practical bell work, in which the various problems a bell man should understand is illustrated. The exercises provided for in this section of the course, teach the student the principles of making connections for bells, push buttons, switches, strap keys, buzzers, floor attachments, annunciators, letter boxes, door attachments and batteries.



SECTION OF ELECTRICAL ROOM, SHOWING WIRING AND CONNECTIONS.  
STUDENTS' WORK.



SECTION ELECTRICAL ROOM. SWITCH BOARD AND WIRING FOR ELECTRIC LIGHTS. STUDENTS' WORK.

In that part of the course devoted to burglar alarm systems, the student acquires a knowledge of how to wire for, and to make connections with, window, door, and transom springs, and the arrangement of alarm bells.

In electric gas lighting, the work includes making connections for automatic gas burners, automatic push buttons, spark coils, induction coils, multiple and ratchet burners.

On the completion of the foregoing courses in bell work, burglar alarm wiring, and electric gas lighting, electric wiring is then taken up. This section embraces wiring on cleats and insulators, also molding and tube work. Everything pertaining to work of this character is taught, and all fixtures and attachments commonly used in electric wiring is utilized in the erection and running of wires.

The room occupied by the Electrical Department is of large proportions, and ample ceiling and wall surface is afforded for attaching wires and fixtures.

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## HOUSE, SIGN AND FRESCO PAINTING.

THE Painting Department, comprising separate evening classes in House, Sign and Fresco Painting, and Day Classes in Sign Work, and in House and Fresco Painting, is under the supervision of the Trade School Committee of the Master Painters' and Decorators' Association of New York, consisting of Messrs. William H. Oliver, John Beattie, John Noll, A. H. Lorton, H. D. Moeller, Jr., and James Allan.

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## HOUSE PAINTING.

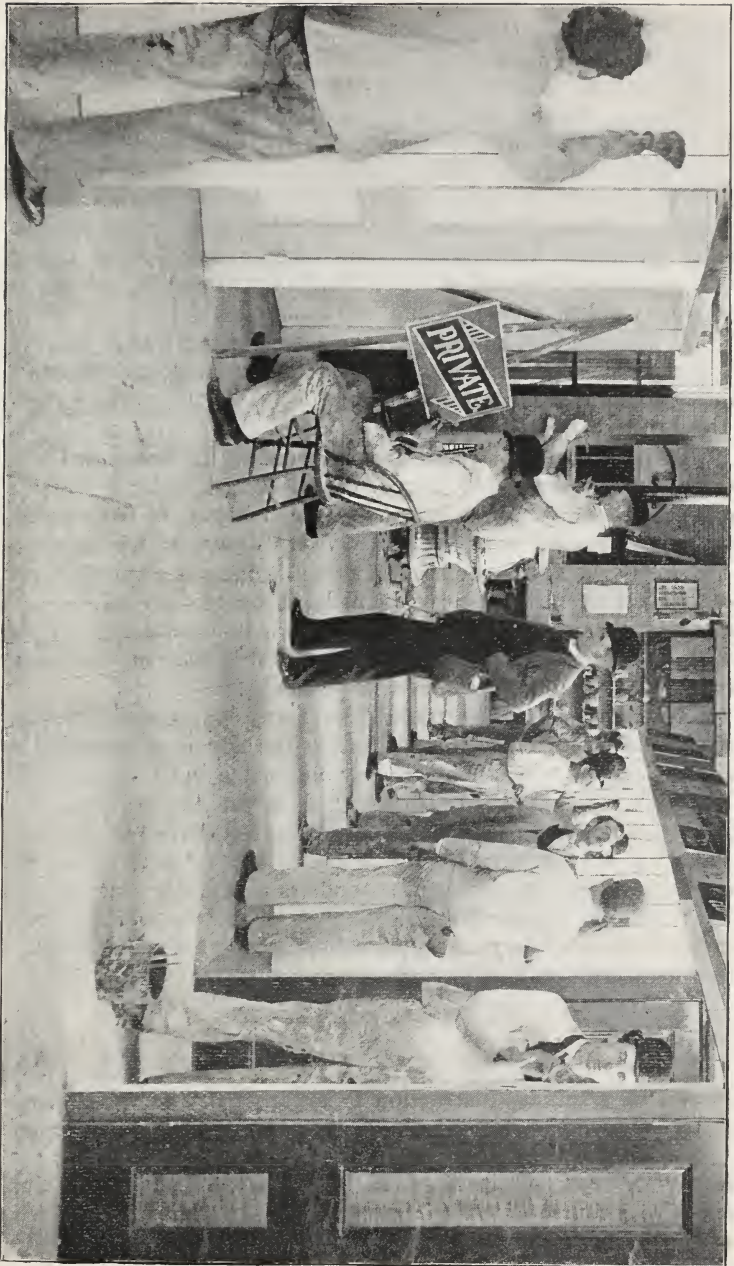
**EVENING CLASS.**—Instruction in House Painting will be given on Monday, Wednesday, Thursday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Sixteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 24 years of age.

**DAY CLASS.**—A four months' day course of instruction in House and Fresco Painting will be commenced on December 12, 1898. Certificates will be awarded on April 5, 1899, to those students who pass the examination which is held during the final week of the term. The instruction is given daily, from 8 a.m. to 4 p.m., except on Saturday, when the school closes at 12 o'clock.

**TERMS:**—Forty dollars for the course, to be paid when name is entered. Good board and lodging can be obtained for five dollars





INTERIOR VIEW OF HOUSE PAINTING SHOP.

per week. This class is reserved for young men between 17 and 24 years of age.

In House Painting, the manual instruction is as follows: Care of brushes and pots; glazing, treatment of new wood, including killing knots, priming, puttying and sandpapering, second and third coats; burning off paint; painting brickwork, woodwork and plaster walls; lining; mixing white paint, materials required for same; names of the ordinary colors and stainers and their use; mixing oil colors; mixing kalsomine colors; painting in three shades; flatting; stippling; kalsomining, including preparation of size, sizing, and preparation of kalsomine; staining; varnishing; treatment of hard wood; polish white; gilding, and graining.

In addition to the foregoing, the day class receives instruction in exterior painting, marbling, bronzing, paper hanging, and fresco painting. The fresco painting is taught in the evening, but a portion of the day is set apart for practice.

The scientific instruction of the course in house painting treats of the following subjects: 1. White lead; 2. Oils; 3. Turpentine; 4. Dryers; 5. Colors and their Composition; 6. Brushes and their care; 7. Painting; 8. Gilding; 9. Varnishing; 10. Kalsomining.

One of the chief requisites of a good painter is a knowledge of how to mix colors. Particular attention is devoted to this part of the course, practice being afforded the pupils in mixing both oil and kalsomine colors. In mixing the paints, colors of various shades are given, which the pupil is required to match.

To young men in the trade, the evening course offers many advantages, as opportunity for practice in the advanced branches of the trade is given which is not readily obtainable in the shop.

While beginners are also admitted to the evening class, it is more advisable for those having no previous knowledge of the trade to take the day course. Greater scope in work is afforded in the way of exterior painting, and the members of the day class have a chance to do ceiling work from scaffolding. That the novice should become accustomed to the scaffold is important, as it enables him to do his work with more confidence and with greater speed.

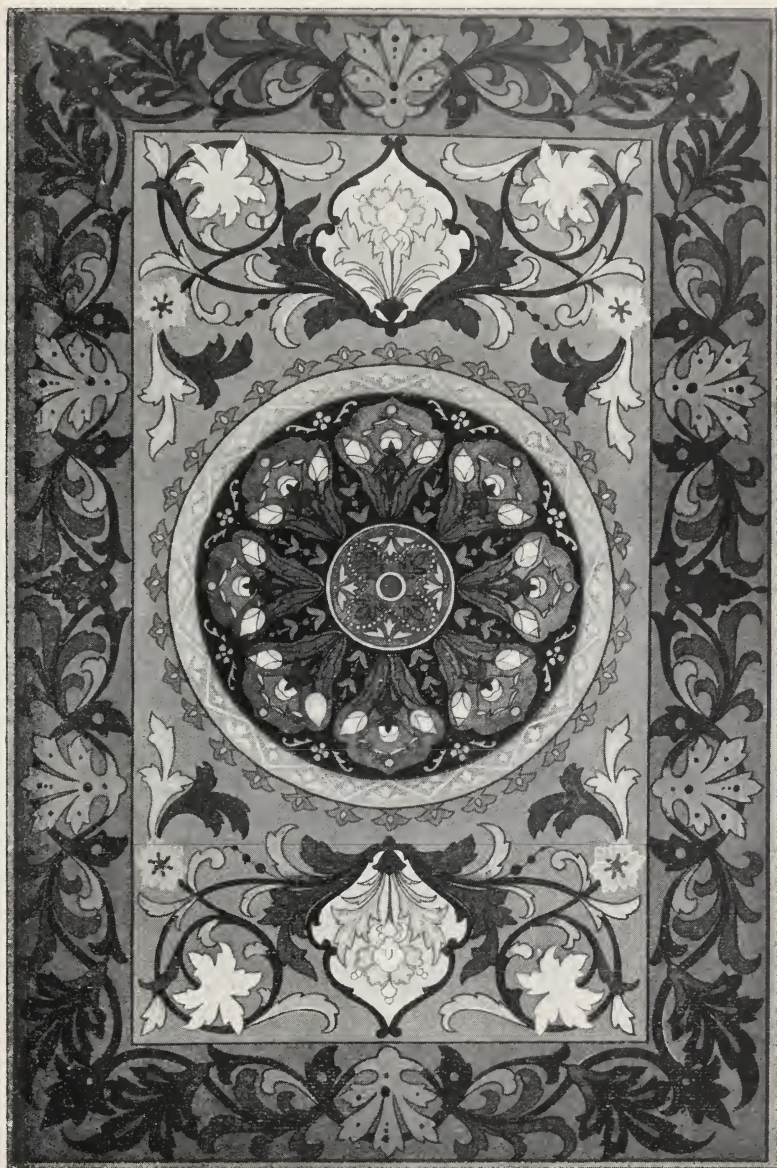
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## FRESCO PAINTING.

**EVENING CLASS.**—Instruction in Fresco Painting and Decorative Drawing will be given on Monday, Wednesday, Thursday and Friday evenings from 7 to 9.30 o'clock, commencing on October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Twelve dollars for the course, to be paid when name





PANEL PAINTED BY A STUDENT OF THE FRESKO CLASS.

is entered. This class is reserved for young men between 17 and 24 years of age.

The instruction in drawing will be on Wednesday, and the other evenings of the week will be devoted to fresco painting. Those who take this course will be expected to attend for both drawing and painting.

The instruction consists in preparing walls and ceilings for kalsomine; treatment of cracks and stains; preparation of size and how to mix kalsomine; lining; how to make and cut stencils; laying in panels; how to make pounces; how to lay on a flat ornament; how to shade from the flat; how to shade an ornament; mouldings and how to shade them; tinting; wall and ceiling work.

In the fresco class, the work is done on plastered walls and ceilings, and on canvas screens. The walls are arranged in alcove fashion, and measure six feet by nine, affording a splendid surface for painting. The fresco department, in addition to being one of the oldest in the school, is also, by reason of the beautiful work that is done from season to season, one of the most attractive. Illustrations of some of the panels painted by students are shown in this catalogue, and there are many other excellent specimens of decorative painting on exhibition at the School. As an aid to the work in colors, instruction in drawing is also given. This drawing is of a character that is particularly valuable to one studying fresco painting, and greatly assists the student in grasping the principles of light and shade, as well as tending to give the training necessary to develop accuracy of the eye and hand.

## SIGN PAINTING.

**EVENING CLASS.**—Instruction in Sign Painting will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Twelve dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 24 years of age.

**DAY CLASS.**—A four months' day course of instruction in Sign Painting will be commenced on December 12, 1898. Certificates will be awarded on April 5, 1899, to those students who pass the examination which is held during the final week of the term. The instruction is given daily from 8 a.m. to 4 p.m., except on Saturday, when the school closes at 12 o'clock.

**TERMS:**—Twenty-five dollars for the course, to be paid when name is entered. Good board and lodging can be obtained for five



PANEL PAINTED BY A STUDENT OF THE FRESCO CLASS.



dollars per week. This class is reserved for young men between 17 and 24 years of age.

The Manual Instruction is as follows:—1. The proper way of making boards for signs, and the method of preparing them for lettering. 2. Treatment of old signs for the purpose of re-lettering. 3. Styles of letters and spacing. 4. Lettering, one color. 5. Lettering, two or more colors. 6. Shading, blocking and lining. 7. Smalting. 8. Gilding on wood and on glass. 9. Lettering on Japanned plates. 10. Lettering on muslin. 11. Lettering on wire.

The scientific instruction consists of lectures on the colors principally used, and how they should be mixed to meet the requirements of different kinds of work: what colors should be used in shading and blocking to produce the effect desired. Styles, proportions and spacing of letters. Laying out work. Preparation of size; application of size and leaf, and the difference in the treatment of gilding on wood and on glass. Use of Japans and Dryers, Smalting and such other subjects of a technical character as can only be acquired in a work-shop in many years.

After understanding how to prepare a new as well as an old sign board for work, the pupil is practiced in forming the letters of the alphabet in Roman, Block and Egyptian styles, so as to impress on the mind the shape and proportion of each letter. Then with palette and pencil, signs are painted from designs furnished by the instructor. In a short time the pupil understands not only how to letter, but can also lay out his work. The work given pupils is of

<b>BANKERS HAIGHT &amp; FREESE, BROKERS.</b>			
<b>D. MARKS,</b> CABINET MAKER —AND— UPHOLSTERER. <i>Repairing Neatly done.</i>	<b>GALL &amp; LEMBKE,</b> MANUFACTURERS OF DEALERS IN <b>SPECTACLES AND EYE GLASSES</b>	<b>MIDDLETOWN LIFE INSURANCE CO.</b>	<b>H. E. MILLER</b> PRACTICAL <b>PLUMBER</b> AND <b>GAS FITTER.</b>
<b>The John Pettit Realty Co.</b>			
<b>DOBBIN'S</b> FIRST CLASS <b>RESTAURANT.</b> LUNCH 25¢ <i>Tables Reserved for Ladies</i>	<b>PATRICK HENRY,</b> DEALER IN TEAS, COFFEES, SPICES, — BUTTER, CHEESE, EGGS, ETC. — <i>Restaurant Supplies.</i>	<b>M. T. NESBITT,</b> Real Estate —AND— <b>INSURANCE BROKER.</b>	<b>HENRY BATTERMAN,</b> DEALER IN <b>Dry Goods Etc.</b>
<b>AMERICAN BANK NOTE CO.</b>			



INTERIOR VIEW OF SIGN PAINTING SHOP.

INTERIOR VIEW OF THE BLACKSMITHS' SHOP,





the same character and variety as done in a shop, even to laying out and painting large signs requiring the use of a ladder to work from.

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## BLACKSMITHS' WORK.

**EVENING CLASS.**—Instruction in Blacksmiths' Work will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing on October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Twelve dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 25 years of age.

This course embraces general blacksmithing, tool making, railing and ornamental work. In forging the instruction will be in the management of the fires, in drawing down, bending, shortening, welding, splitting, punching, chamfering, riveting, railing and house work. In vise work, the instruction will be in filing to line, fitting tongues and grooves, chipping, bevels, scraping, ring work, drilling, etc. In tool making the instruction will include machine, lathe, millers', stone-cutters', carpenters', plumbers', pipe and steam-fitters', tin and copper-smiths' tools; also in the principles of tempering.

The growing demand for wrought iron work makes the instruction given at the New York Trade School particularly valuable. The work now on exhibition at the school shows what neat and beautiful work can be done after one season's instruction.

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## BRICKLAYING.

**EVENING CLASS.**—Instruction in Bricklaying will be given on Monday, Wednesday and Friday evenings from 7 to 9.30 o'clock, commencing October 17, 1898, and ending April 5, 1899. Beginning March 20, 1899, instruction will be given during the day from 8 a.m. to 4 p.m., instead of in the evening. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Sixteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 22 years of age.

This course of three evenings each week for nearly six months has enabled those who are regular in attendance to do from one-third to one-half a day's work on leaving the school, and to do a full day's work after a few months' practice at real work.

**DAY CLASS.**—A four months' day course of instruction in Bricklaying, including also Plastering and the Drawing of Plans,

will be commenced on December 12, 1898. Certificates will be awarded on April 5, 1899, to those students who pass the examination which is held during the final week of the term. The instruction is given daily from 8 a.m. to 4 p.m., except on Saturday, when the school closes at 12 o'clock.

TERMS:—Forty dollars for the course, to be paid when name is entered. Good board and lodging can be obtained for five dollars per week. This class is reserved for young men between 17 and 24 years of age.

Those who take this day course will be able to work as well as the average journeyman, and will require but little practice after leaving the school to enable them to work as fast. They will also have a knowledge of the trade few journeymen possess, which will fit them to be foremen and master builders in the future. Besides the regular course of instruction in bricklaying, the day class will acquire a



A ROW OF DWELLINGS IN 67TH STREET, BETWEEN FIRST AND SECOND AVENUES, THE BRICK WORK OF WHICH WAS DONE BY GRADUATES OF THE SCHOOL.



INTERIOR VIEW OF BRICKLAYING ROOM.



knowledge of how to read plans, and of plastering. The course in plastering will be the same as that followed in the evening plastering class.

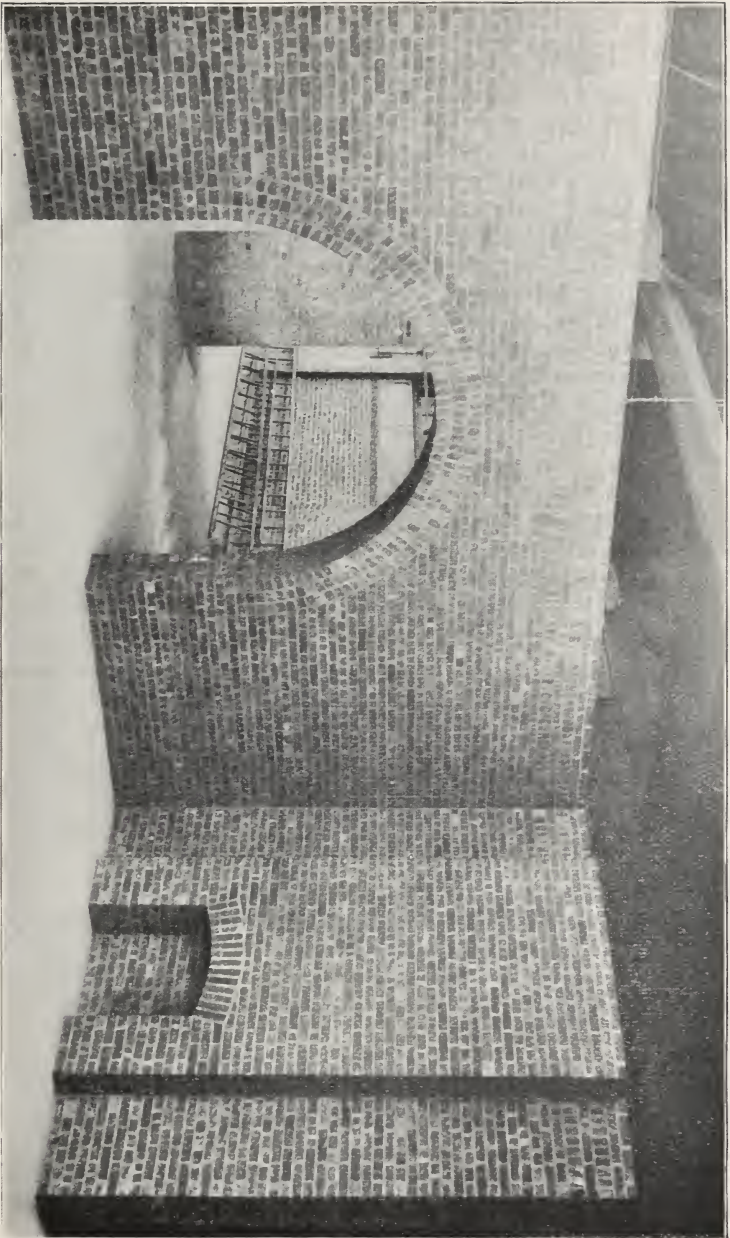
The manual instruction in bricklaying includes the building of eight, twelve, sixteen and twenty-inch straight walls; return corners and intersecting walls; piers, arches, fire-places and flues; setting window frames, sills and lintels; blocking, toothing, corbelling, etc.

In the bricklaying classes the young men are taught first how to handle the trowel and how to spread mortar. After this they are practiced on eight and twelve inch straight walls. When these can be carried up plumb and the courses of brick laid level, the class builds, successively, walls returned at right angles, piers, arches, fire-places and flues, etc. In all work great care is exercised that each brick is properly laid and that the joints are neatly pointed. The brick work is carried up as high as the young men can conveniently work; it is then torn down and the bricks cleaned, to be used again. Before an exercise is commenced, the instructors show how it should be done. The young men are then required to practice under the constant supervision of the instructors until they can do the work well.

The scientific instruction will be upon the properties of mortar and cement, and how they should be mixed. Arches: their various styles and the advantages of each. Flues: their construction and utility. Foundations, walls, bonding, etc.

The scientific instruction is given by means of lectures, illustrated by experiments and carefully prepared manuals. These lectures have a direct bearing on the practical part of the trade and assist the pupil to clearly understand the important features of his work.

There are many buildings in the city, the brick work of which was done by young men who could not handle a trowel before coming to the school. Members of the class of 1883-84, after finishing their course of instruction, were employed by the founder of the New York Trade School to build three stores on 125th Street, near 5th Avenue. Many members of the classes of 1884-85 and of 1885-86 built the large apartment house on the corner of 93d Street and 9th Avenue. The members of the class of 1885-86 also built four houses on 68th Street, between 1st and 2nd Avenues. The young men of the class of 1886-87 built the 9th Avenue section of the 93d Street apartment house. The additions to the New York Trade School in 1888, and five houses on 68th Street were built by members of the class of 1887-88. Five houses on 69th Street and the Trade School Lodging House were built by members of the class of 1888-89. The walls of the Plumbing and Carpentry shops of the school were built by members of the day and evening classes of 1890-91. Fifteen houses, and an extension to



SPECIMEN OF STUDENTS' WORK. THIS, WITH MUCH OTHER WORK, IS NOW ON EXHIBITION AT THE SCHOOL.

the school were built by members of the day and evening classes of 1891-92. Twelve houses in 67th Street, between 1st and 2nd Avenues, were erected in 1894 by students of that year, and the large addition made to the school in 1896 was done by the members of the classes in bricklaying. A calculation was made of the number of brick laid each fortnight, and the young men's wages were graded accordingly. Much of the face brick work on the buildings erected the last few seasons has been done by former graduates of the School. It would be difficult to find more thorough or better work. The lines are true; each joint is straight and neatly struck. The work looks as though the builders had "put their hearts in it." The Philadelphia Builders' Exchange some years ago sent a committee to inspect these buildings and the work on exhibition at the New York Trade School. So favorable a report was made that it was decided to establish the Mechanical Trade Schools of the Philadelphia Builders' Exchange.

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## PLASTERING.

**EVENING CLASS.**—Instruction in Plastering will be given on Monday, Wednesday and Friday evenings from 7 to 9.30 o'clock, commencing October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

**TERMS:**—Sixteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 26 years of age.

The course in plastering is very complete and includes lathing, scratch and brown coat work, hard-finishing and cornicing.

The plastering room is divided into compartments measuring eight by ten feet and nine feet high, the walls and ceilings being lathed in the usual manner. The students are then taught how to apply the scratch coat on the walls and ceilings. This coat is taken off by laborers after each evening's work, leaving the laths ready for the young men on the following evening. The class is exercised on this work until it can be done neatly and rapidly. The scratch coat is then allowed to harden and the young men apply the brown coat work. This coat is also removed after the work is finished. Then follows hard finishing and cornice work.

The course in plastering is arranged for beginners as well as those who are working at the trade. To the apprentice particularly this course presents many advantages, as little or no opportunity is given in the trade at large to learn cornicing. The skill that can be acquired in the plastering class can be seen by the work now on exhibition at the school.





INTERIOR VIEW OF PLASTERING SHOP.

## CARPENTRY.

**EVENING CLASS.**—Instruction in Carpentry and Joiners' work will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass Certificates will be awarded.

**TERMS:**—Sixteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 22 years of age.

**DAY CLASS.**—A four months' day course of instruction in Carpentry, Joiners' Work and Construction, including also the Drawing of Plans, will be commenced on December 12, 1898. Certificate; will be awarded on April 5, 1899, to those students who pass the examination which is held during the final week of the term. The instruction is given daily from 8 a.m. to 4 p.m., except on Saturday, when the school closes at 12 o'clock.

**TERMS:**—Thirty-five dollars for the course, to be paid when name is entered. Good board and lodging can be had at five dollars per week. This class is reserved for young men between 17 and 24 years of age.

The Carpentry department of the school provides a very thorough and practical course in house carpentry for young men.

The course, at the beginning, embraces a variety of bench work, which brings into use all the tools commonly used in the trade. It is necessary that a young man learning the trade of carpentry first obtain a knowledge of how to properly use his tools and how to care for same. Great care is taken that each student acquires a workmanlike and skillful use of the various tools, and that he understands how to keep them in fit condition for work.

Continuing in the course, the student is taught how to lay out and construct centers and window frames; make, case and hang doors; lay beams and set bridging in same; erect stud partitions and lay flooring. A complete course in joinery work is given, and the way to lay sheathing and shingles on a frame house is also taught.

Lectures treating of the scientific side of the trade are given during the progress of the course.

This course of instruction gives each member of the class a varied amount of work, and is arranged for those desiring to enter the trade as well as those who are working in shops.

In addition to the work outlined, the day course will also include house construction and framing. A large frame house, erected by last season's classes is now on exhibition at the school.



INTERIOR VIEW OF CARPENTRY SHOP.

Although the lack of space prevents the erection of a frame house of full dimensions, the same attention is devoted to all the details of construction as would be required in similar work on a larger scale. In work of this kind the pupils obtain a knowledge of the erection of framing for a house; also of sheathing and shingling. The window-frames, sashes, doors, etc., are all made and set in position by the young men.

Students of the evening class can obtain this part of the course treating on framing by attending a second term. The limited time in the evening course does not admit of this instruction being given during the student's first year.

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## PRINTING.

**EVENING CLASS.**—Instruction in general mercantile printing or job work will be given on Monday, Wednesday and Friday evenings from 7 to 9.30 o'clock, commencing on October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass Certificates will be awarded.

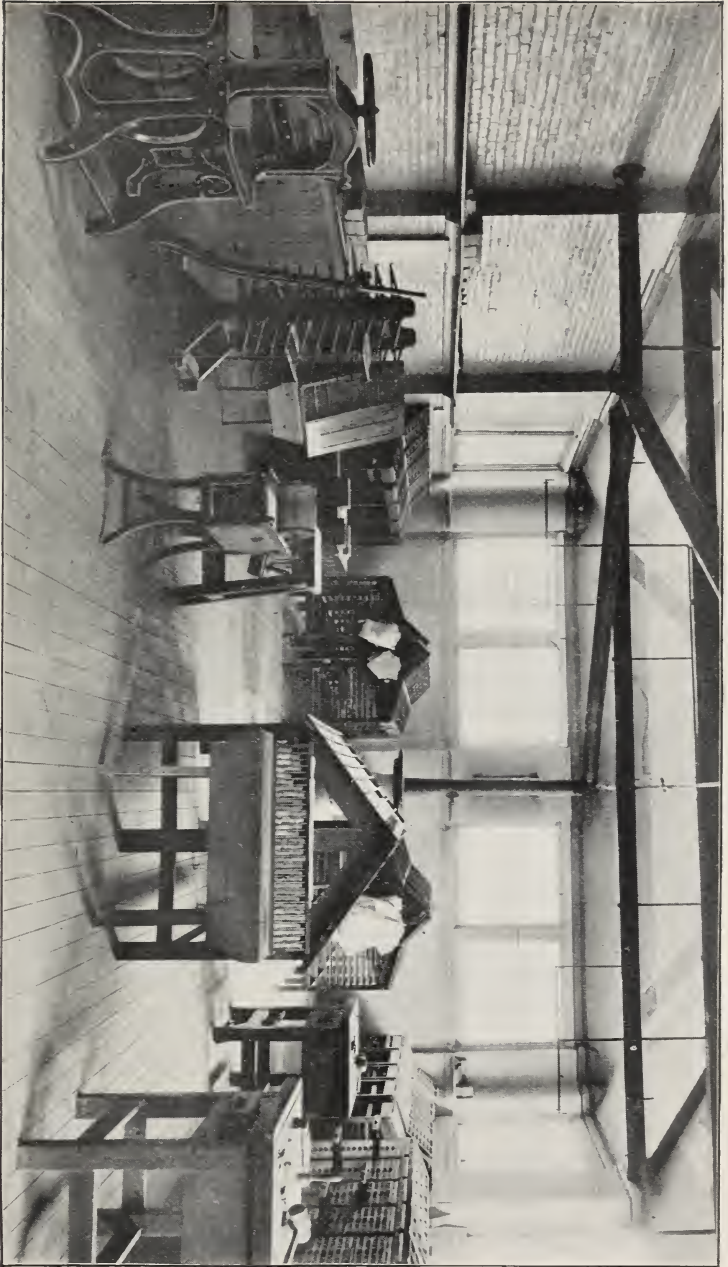
**TERMS:**—Fourteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 22 years of age.

The instruction in this course will consist of all kinds of mercantile printing, such as bill-heads, note-heads, statements, letter-heads, business cards, dodgers, circulars, blank forms, tabular work, cutting and mitring rules; also, making ready for press and press work. In work of this character, it is not a matter of typesetting alone. The value of work depends also on its attractive appearance, and to this phase of the work, particular attention is devoted. The general principles that apply to good display is carefully explained in each piece of work undertaken by the student.

The course of instruction has been prepared with great care and every effort is made to give each student a knowledge of the trade which it would be difficult to acquire in many years in a printing office. To young men employed in printing offices during the day and who possess a knowledge of straight composition, this course is especially adapted.

The printing office of the school contains an equipment in the way of type, presses and machinery that affords every facility for instructive purposes, and every detail of job composition is taught. The specimens of general job work, tables and rule work done by the pupils, and which can be seen by visiting the School, shows what can be learned by those who take this course.





INTERIOR VIEW OF THE PRINTING OFFICE OF THE SCHOOL.

## STEAM AND HOT WATER FITTING.

**EVENING CLASS.**—Instruction in Steam and Hot Water Fitting will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending April 5, 1899. Two evenings per week will be devoted to practical work, and one evening will be given over to lectures. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

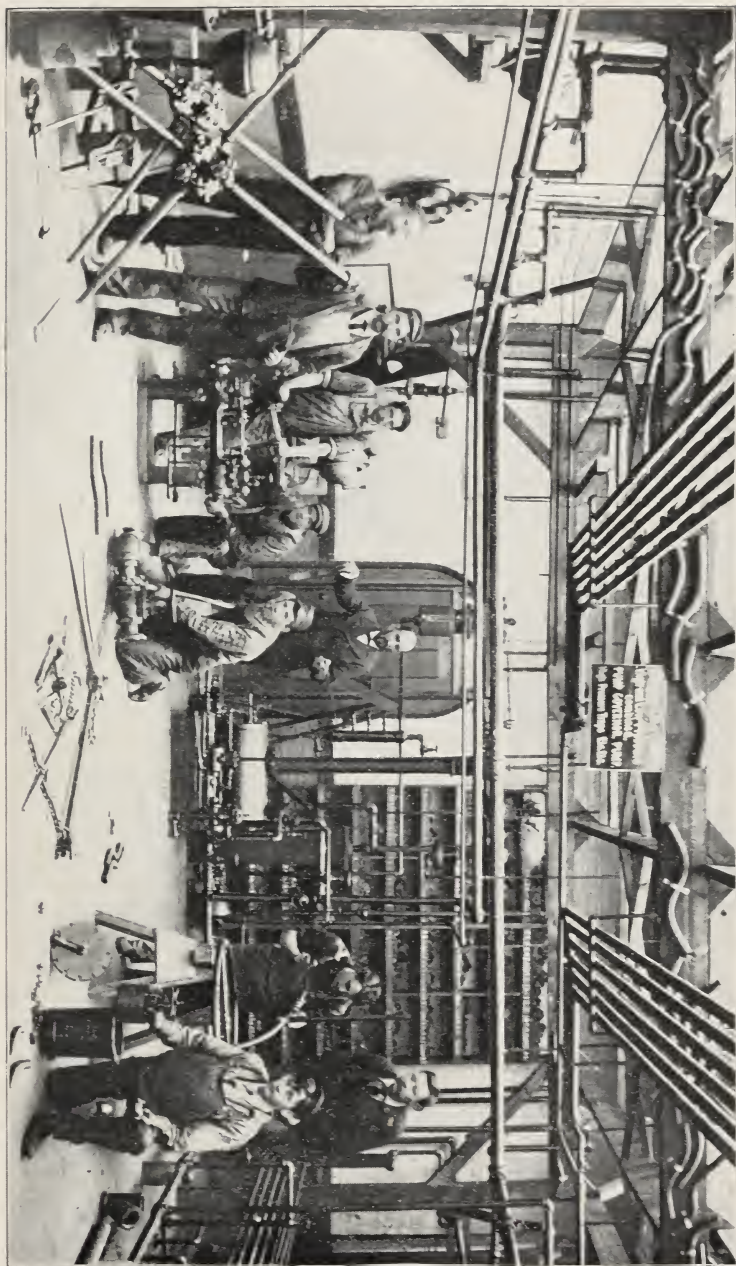
**TERMS:**—Fourteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 26 years of age.

**DAY CLASS.**—A three months' day course of instruction in Steam and Hot Water Fitting, including also the drawing of plans, will be commenced on January 4, 1899. Certificates will be awarded on April 5, 1899, to those students who pass the examination, which is held during the final week of the term. The instruction is given daily from 8 a.m. to 4 p.m., except on Saturdays, when the school closes at 12 o'clock.

**TERMS:**—Forty dollars for the course, to be paid when name is entered. Good board and lodging can be obtained for five dollars per week. This class is reserved for young men between 17 and 25 years of age.

The Steam and Hot Water Fitting Department is under the supervision of the Trade School Committee of the Master Steam and Hot Water Fitters' Association of New York, consisting of Messrs. John J. Smith, S. J. Geoghegan, Enoch Rutzler, J. D. Clark, James Curran and Charles J. Gillis.

In the practical part of the course, the students in both the evening and day classes will be taught how to set and connect different kinds of radiators and how to make the various kinds of coils in common use, such as return coils, mitre coils, corner coils, etc. These coils are constructed in various sizes, three-quarter to two-inch pipe being used. Then follows instruction in piping of dwellings and buildings, and the various systems of heating, such as steam one pipe, steam two pipe, hot water, direct-indirect and high and low pressure, are each erected in turn. The students are given a set of plans and on these plans are drawn the actual heating plant that would be required for a building of the kind represented. The measurement of each piece of pipe is taken from the plan, and the fittings, valves and other fixtures required to make a complete job are used in the construction of the work. In the workshop there is an arrangement of girders and beams to which the work is suspended, the pipes being run with a proper pitch the same as would be demanded in actual practice. On the completion of each



INTERIOR VIEW OF THE STEAM FITTING SHOP.



job, connection is made with one of the steam lines of the school and the work which has been erected receives a thorough test.

The scientific instruction consists of lectures on the principles of steam and hot water heating. The lectures will include the following subjects: tools, fittings and pipe; general heating; low pressure steam; indirect steam heating; single pipe low pressure steam; hot water heating; high pressure steam heating; steam power plant; exhaust steam heating; power fan or blower system of steam heating and ventilating.

The trade of steam and hot water fitting has advanced greatly in importance within recent years, and the extensive and complicated plants now placed in large structures erected in all parts of the country requires more than ordinary skill and knowledge on the part of the workmen. These courses offer young men unusual advantages in obtaining a thorough knowledge of both the practical and scientific branches of this trade.

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## SHEET METAL CORNICE WORK.

**EVENING CLASS.**—Instruction in Sheet Metal Cornice Work will be given on Monday, Wednesday and Friday evenings from 7 to 9.30 o'clock, commencing on October 17, 1898, and ending on April 5, 1899. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

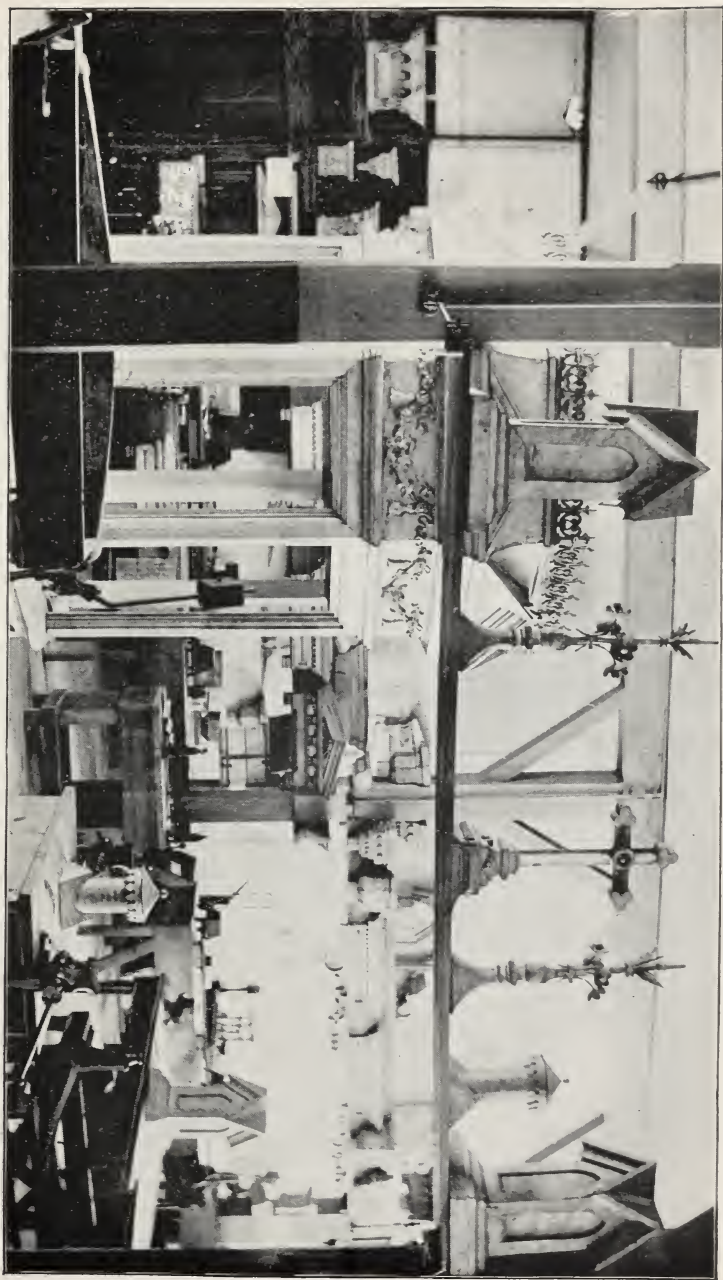
**TERMS:**—Twelve dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 26 years of age.

This Class will be under the supervision of the Trade School Committee of the New York Employers' Association of Roofing and Manufacturers in Sheet Metal, consisting of Messrs. M. Halliday, John Neil and Frank Shiller.

By this course it is intended to provide for young men in the roofing and cornice trade an opportunity to advance themselves in the work of cornice making.

The instruction will be as follows: Part I.—1. Cutting curves and circles; showing the use of the shears. 2. Filing and tinning the soldering copper. 3. Soldering flat seams. 4. Soldering upright seams. 5. Forming simple mouldings. 6. Problems in practical geometry. 7. Drawing simple details from scale drawings. Part II.—Drawing details, obtaining patterns from same, and setting together the following work: 1. A moulded gutter with flat and return head. 2. A square moulded leader head. 3. An octagon moulded leader head. 4. A plain window cap. 5. An ornamental window cap. 6. Raised panel work. 7. A plain cornice with mouldellions. 8. An ornamental cornice with brackets. 9. Square turrets. 10. Finials. 11. Crosses. 12. Pediments. 13. Dormers. 14. Ventilators 15. Flat





INTERIOR VIEW OF THE CORNICE SHOP OF THE SCHOOL.

skylights. 16. Hip skylights. 17. Bay windows. 18. Special problems. Part III.—Hammer work. This section comprises the drawing of details, obtaining patterns from same, and constructing the following, viz.: In hand work: 1. Making a six inch full ball in six gore sections. 2. Making a six inch full ball in six horizontal sections. 3. Round finial. 4. Centre piece for a ceiling. In machine work: 1. Circular panel in two pieces using machine profiles. 2. Circular moulding in two pieces using machine profiles. 3. Segmental pediments with columns.

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## PLUMBING.

**EVENING CLASS.**—Instruction in Plumbing will be given on Monday, Wednesday and Friday evenings, from 7 to 9.30 o'clock, commencing October 17, 1898, and ending April 5, 1899. The manual instruction will be given on Monday and Wednesday evenings, and the scientific instruction or lectures will be held on Friday evening. During the final week of the course an examination will be held, and to those who pass certificates will be awarded.

This class is limited to 75 young men. Should the applications exceed this number, a second class will be started, which will meet on Tuesday, Thursday and Friday evenings.

Students who passed the examination of the previous term and return for a second course, will be permitted to practice in the workshop on Friday evening.

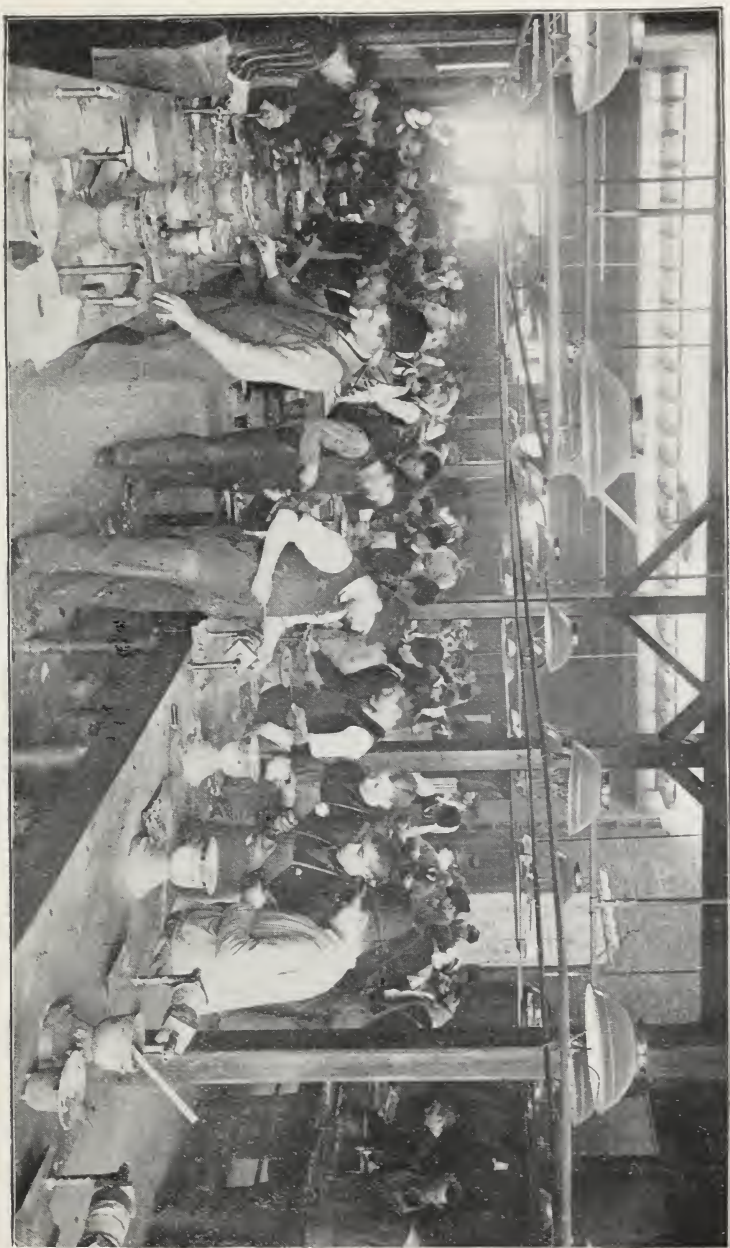
**TERMS:**—Fourteen dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 21 years of age.

**DAY CLASS.**—A four months' day course of instruction in Plumbing and Gas Fitting, including also the Drawing of Plans, will be commenced on December 12, 1898. Certificates will be awarded on April 5, 1899, to those students who pass the examination which is held during the final week of the term. The instruction is given daily from 8 a.m. to 4 p.m. except on Saturday, when the school closes at 12 o'clock.

**TERMS:**—Forty dollars for the course, to be paid when name is entered. This class is reserved for young men between 17 and 22 years of age.

Instruction in Lead Burning is also given. For this branch the charge is five dollars extra. Arrangements for lead burning can be made after the course has commenced.

The plumbing department of the school is under the supervision of the Trade School Committee of the Master Plumbers' Association of New York, consisting of Messrs. Edward Murphy, George D.



INTERIOR VIEW OF THE PLUMBING SHOP OF THE SCHOOL.

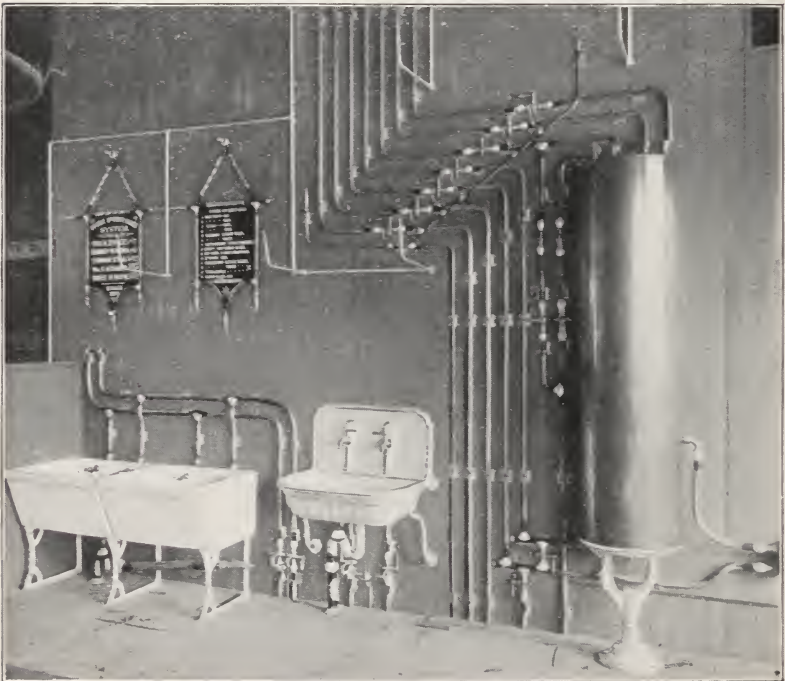


Scott, Frank Reynolds, T. J. Tuomey and James Muir. Director of the Department, appointed by the Trade School Committee, Mr. John J. Delehanty.

The manual instruction will include the following work, viz.: Seams; overcast joint; cup joint; wiping horizontal round joint; horizontal branch; upright round; making  $\frac{1}{4}$ -bend; wiping upright branch; stop cock; floor flange; 2-inch ferrule; bath plug; vertical branch; wall flange; making traps; wiping soldering nipples; 4-inch ferrules; making service boxes; wiping tank seams;  $\frac{1}{2}$ -inch round joint;  $\frac{1}{2}$ -inch branch joint;  $\frac{1}{2}$ -inch upright round; oblique round joint; overhead round joint; plain bib vertical branch; 2-inch upright round; 2-inch upright branch; 2-inch vertical branch; 2-inch short bend with ferrule; 4-inch short bend with ferrule.

At the conclusion of these exercises students will be placed on work of a more complicated character, such as setting up basins, sinks, boilers, washtrays, baths and closets.

The scientific instruction will be upon the proper arrangement of service and waste pipes and upon drainage and ventilation, as follows: drain, soil and waste pipes; trapping and ventilation of drain

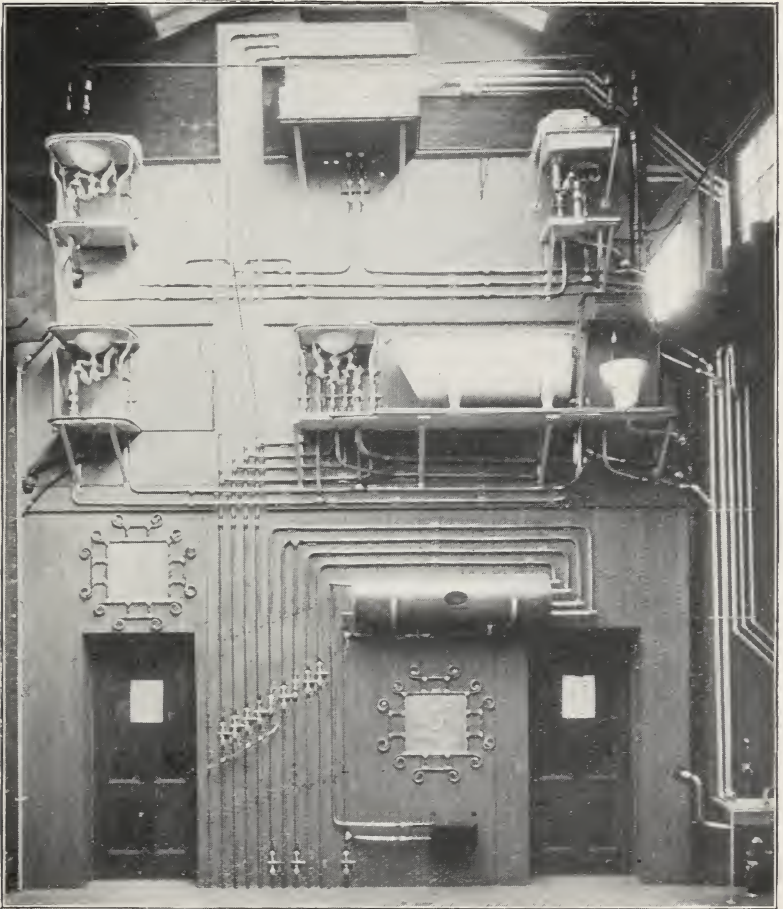


SPECIMEN OF STUDENTS' WORK, NOW ON EXHIBITION AT THE SCHOOL.



soil and waste pipes; supply pipes; boilers; tanks; fixtures; trapping and ventilation of fixtures; pumps; miscellaneous.

The plumbing department at the New York Trade School has earned a high reputation, and the system on which it is conducted has been followed in the plumbing schools now established in various parts of the United States and at the plumbing school in Montreal, Canada. The plumbing shop at the New York Trade School is fitted up with all the appliances of a first-class shop. Each young man is furnished with a set of tools and has his allotted place at the work bench. He is provided with a separate compartment, in which the specimens of his work are kept after being ap-



PLUMBING, COMPLETE, OF A THREE-STORY HOUSE.  
WORK DONE BY STUDENTS. NOW ON EXHIBITION AT THE SCHOOL.

proved of by the instructor. These specimens can be taken away at the end of the course by paying for the cost of the material used. The solder is melted by means of Bunsen burners, supplied with gas. This avoids the heat and unwholesome gases of charcoal, or the danger which might arise from a great number of gasoline furnaces. Each member of the class is advanced as rapidly as his proficiency will allow. Great care has been bestowed on the scientific course of instruction. For each of the subjects, printed forms are furnished, containing questions with blanks left for the answers. The lecturer reads a question and writes the answer to it on the blackboard. This answer is copied by the young men in the blank space in the printed forms. The lecturer then proceeds to explain fully what is meant, to illustrate his meaning by diagrams, and to answer questions put by members of the class. The printed forms, after being filled up, are kept by the young men for future reference. Diagrams are also given the members of the class of improperly arranged plumbing, many of them taken from faulty work that has actually been done in this city, which they are required to correct. By this course of manual and theoretical instruction, a knowledge of the trade is acquired, which it would be difficult to obtain in any other way. Young men in the trade, and those who propose to enter it, should remember that the plumber, if he is to succeed, must know far more than was required of him a few years ago.

The evening plumbing classes have been more largely attended than any of the classes at the school, the great majority of the young men being "helpers," who obtained at the New York Trade School the skill and knowledge not easily acquired in the shops, and whose term of service is reduced one year by attending the school. Many young men without any previous knowledge of the trade have also attended the evening classes, and have passed excellent examinations, both in workmanship and the science of the trade.

Of recent years the day class, which is limited to 120 young men, has filled rapidly, and those who wish to take this course should not delay entering. Entrance can be made commencing October 3rd, and applications will be received until the class is full. Young men should not come to New York unless they have been notified that their application has been accepted. The school will not be responsible for expenses incurred by young men who come to the city without ascertaining in advance if admission can be secured.

## TO YOUNG MEN.

Skilled labor all over the United States commands the highest wages, and for one who is master of his trade, steady employment is always assured. In the large cities, owing to the difficulties young men thus far have had in finding an opportunity to learn a trade, the demand for skilled labor is chiefly supplied from abroad. A thorough knowledge of a trade yields its possessor, even if he works but two hundred days in the year, an income equal to that received from twenty thousand dollars invested in government bonds. Ambitious young men have now the opportunity at the New York Trade School to acquire in a short time and at a small expense the knowledge of a trade which will be valuable to them all their lives.

"Can we get work after we leave the School?" is a question often asked. The reply is that, although organized labor unwisely endeavors to keep American young men out of the trades, many friendly hands are stretched out to help them. Nearly seven thousand young men have attended the NEW YORK TRADE SCHOOL since it was founded, the majority of whom have come on the recommendation of brothers or friends who have preceded them. Hundreds of these young men have written, or called at the School, to say that the instruction they received was the making of them. Most of those who have been heard from were getting high wages, and some are now master mechanics.

